AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
J	1 15

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO.(If applicable)
0002	09-Sep-2002	W16ROE-2140-0865	

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
USA ENGINEER DISTRICT, NEW YORK ATTN: CENAN-CT ROOM 1843 26 FEDERAL PLAZA (DACA51) NEW YORK NY 10278-0090	DACA51	**See Item 6**	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		
	X	9A. AMENDMENT OF SOLICITATION NO. DACA51-02-B-0015
	X	9B. DATED (SEE ITEM 11) 01-Aug-2002
		10A. MOD. OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer [X] is extended, [ ] is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

[ ] A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

[ ] B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

[ ] C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

[ ] D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this amendment is to make technical changes to Halon, HVAC and Roof Replacement for Spellman Hall, USMA, West Point, New York. As result of these changes a REVISED BID SCHEDULE is attached.

The bid opening date is extended from 12 September to 19 September at 2:00 P.M. in Room 1841.

Offerors must acknowledge receipt of this amendment prior to the hour and date specifiedin the solicitation or as amended by one of the following methods: (a) by completing items 8 and 15 and returning 1 copy of the amendment (b) by acknowledging receipt of this amendment on each copy of the offer submitted or (c) by separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE TO ACKNOWLEDGE AMENDMENTS BY THE DATE AND TIME SPECIFIED MAY RESULT IN REJECTION OF YOUR BID IN ACCORDANCE WITH THE LATE BID, LATE MODIFICATION OF BIDS, OR LATER WITHDRAWAL OF BIDS (FAR 14.304)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED 09-Sep-2002

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION SF 30 - BLOCK 14 CONTINUATION PAGE

The following have been added by full text:
AMEND#2

.

1. Replace existing Bid Schedule with new attached Bid Schedule Section 00010

Section 00010 - Solicitation Contract Form

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Lump Sum		
	Sum firm price for supply all labor materials, equipment and any other services necessary to complete the Renovation of the Spellman Halll and DAAS Computer Center as shown on the contract drawings and specifications excluding CLINS 002-0003.				

NET AMT

TOTAL LINE ITEM 0001 _____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		1	Lump Sum		
	New Construction (Optional) All work necessary for construction of the generator and all related equipment (i.e. transfer switches, distribution etc.) in accordance with spec section 16263.				

TOTAL OPTIONAL BID ITEM 0002 _____ NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003		1	Lump Sum		
	New Construction (Life Safety) All work necessary for construction of the New sprinkler system on floors 1-5 only as shown on drawings FP-105 thru FP-108				

NET AMT

TOTAL LINE ITEM 0003 _____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004		1	Lump Sum		
	Lighting Protection (Optional)				

TOTAL OPTIONAL BID ITEM 0004 _____

TOTAL BASE BID ITEMS AND OPTIONAL BID ITEMS 0001-0004 _____

__

1. The low bidder for the purpose of award will be the conforming responsible bidder offering the lowest Total Bid Amount for Combined Basic and Optional Work.
2. Any bid, which is materially unbalanced, may be rejected. An unbalanced bid is one, which is based on prices significantly less than cost for some work and prices, and significantly overstated for the other work.
3. Bidders are reminded that they must bid on the issued plans and specifications as amended. Any deviations, conditions or attachments made by the bidder himself thereto may render the bid non-responsive and may be cause for its rejection.
4. Bidders are required to bid on all items or their bid will be rejected.
5. The Optional Work will be exercised within 30 calendar days from NTP.
6. The Government has no obligations to exercise the Optional Work under this contract.

2. Standard Form 1442, item 13D Additional Solicitation Requirements:
Change 60 calendar days to read 180 calendar days for Government Acceptance.

3. SPECIFICATION 16230

Paragraph 2.2.1 Equipment Rating and Capability
Delete the words "800KW" from first sentence and replace with "650 KW engine with a 800 KW prime rated generator"at 0.8 power….

Paragraph 2.15.6.1A Weatherproof Sound Attenuated Housing
Second paragraph, first sentence; delete the words "walk-in type and "

Paragraph 2.15.7A Load Bank Resistors
Delete the words "500 KW" from first sentence and replace with "300KW"

Paragraph 2.15.6.1.C.9 Personnel Doors
Delete entire paragraph.

Paragraph 2.15.6.1.C.12 Interior Lighting
Second sentence: delete the words "A.C."

Paragraph 2.15.6.1.C.14 Emergency Lighting
Delete entire paragraph.

Paragraph 2.15.6.1.C.15 Breakglass Stations
Delete entire paragraph.

Paragraph 2.15.6.1.C.17 Space Heater
Delete entire paragraph.

Paragraph 2.15.6.1.C.21 Ventilation Exhaust Fan
Delete entire paragraph.

Drawing E-108

A. One line diagram, outdoor generator equipment:

1. Revise the "800 KW" rating of the generator (inside circle) to read "650 KW".
2. Revise the generator rating from "1000 KVA" to "812 KVA".
3. Revise the generator rating from "2778 FLA" to "2257 FLA".
4. Revise the UPS-HVAC circuit breaker rating from "225 AT" to "100 AT".
5. Revise the engine generator set model number from "NAESCO PT6750-3AT" to "North American Equipment Supply Company PTC750E".
6. Revise the Station Power cable and conduit description from "4-1/c #2, 2"conduit" to "4-1/c #2, 1-1/c#6 ground, in 1 1/2" conduit".
7. Revise the size of the empty conduit for future use from 2"C to 1 1/2"C.
8. Revise the UPS-HVAC feeder between the 100 ampere (previously 225 ampere) generator distribution breaker and its respective transfer switch from "3-1/c 300 MCM, 1-1/C #4 and, 3" conduit to "4-1/c #1/0, 1-1/c #8, 1 1/2" conduit"

9. Revise the UPS feeder between the 1200 ampere generator distribution breaker and its respective transfer switch from "4 RUNS of 3-1/c 400 MCM, 1-1/C 400 MCM neutral, 1-1/c #3/0 MCM ground, 3 ½" conduit" to 4 RUNS of 3-1/c 750-kcmil, 1-1/C 750-kcmil (neutral), 1-1/c 3/0 gnd, 5" conduit".
10. Revise the PP-CR feeder between the 1200 ampere generator distribution breaker and its respective transfer switch from "4 RUNS of 3-1/c 400 MCM, 1-1/C 400 MCM neutral, 1-1/c #3/0 MCM ground, 3 ½" conduit" to 3 RUNS of 3-1/c 750-kcmil, 1-1/c 750-kcmil (neutral), 1-1/c 3/0 gnd, 5" conduit".

B. One line diagram, indoor equipment

1. Revise the UPS feeders between the indoor UPS 1200 ampere breaker, the outdoor transfer switch, and the indoor UPS equipment from "4 RUNS (each way) of 3-1/c 350 MCM, 1-1/c 350 MCM neutral, 1-1/c #3/0 gnd, 3" conduit" to "2 trays (each tray being 12" open aluminum ladder cable tray with 6" rails, including bonding, 6-1/c 750-kcmil, 2-1/c 750-kcmil neutral, 2-1/c #3/0 ground".

2. Revise the PP-CR feeders between the indoor PP-CR 1200 ampere breaker, the outdoor transfer switch, and the indoor PP-CR equipment from "4 RUNS (each way) of 3-1/c 350 MCM, 1-1/c 350 MCM neutral, 1-1/c #3/0 gnd, 3" conduit" to "2 trays (each tray being 12" open aluminum ladder cable tray with 6" rails, including bonding, 6-1/c 750-kcmil, 2-1/c 750-kcmil neutral, 2-1/c #3/0 ground".

3. Revise the UPS-HVAC feeders between the indoor UPS-HVAC 100 ampere breaker, the outdoor transfer switch, and the indoor UPS-HVAC equipment from 3-1/c 250 MCM, 1-1/c #4 gnd, 3" conduit to "3-1/c #1/0, 1-1/c #8 gnd, 1 1/2" conduit, between the UPS-HVAC equipment disconnect switch and its outdoor transfer switch"

4. Revise the existing indoor circuit breaker trip rating for the UPS-HVAC feeder from 225AT to 100AT.

5. Add a 1 ½" conduit, to be run between each transfer switch and the engine control panel. Designate this conduit as "Engine Controls (wiring as per engine-generator vendor requirements").

C. Basement Power Plan

1. Revise the UPS distribution between its indoor UPS 1200 ampere breaker to its outdoor 1200 ampere transfer switch (via the crawl space). Revise the 4 runs of 3"conduits and cable to 1-12" cable tray and cable as described B.1 above.

2. Revise the UPS distribution between its outdoor UPS 1200 ampere transfer switch to the UPS (via the crawl space). Revise the 4 runs of 3" conduits and cable to 1-12" cable tray and cable as described in B.1 above.

3. Revise the PP-CR distribution between its indoor PP-CR 1200 ampere breaker to its outdoor 1200 ampere transfer switch (via the crawl space). Revise the 4 runs of 3" conduits and cables to 1-12" cable tray and cable as described in B.2 above.

4. Revise the PP-CR distribution between its outdoor 1200 ampere transfer switch to PP-CR (via the crawl space). Revise the 4 runs of 3" conduits and cables to 1-12" cable tray and cable as described in B.2 above.

5. Add between each transfer switch and the engine control panel a 1 ½" underground conduit.

D. Additional General Notes

1. Add note #9 to read: “All outdoor, underground conduits to be schedule 40 PVC, concrete encased”.

2. Add note # 10 to read: “All tray cables to be 600 volt, single conductor, copper, rated for wet or dry locations. Insulations to be 80 mils thick for 750-kcmil, and 55 mils thick for #1/0 cables. Tray cables to be “Okolon”, as manufactured by the Okonite Company”.

4. Following are Questions asked by contractors and the responses:

1. What symbol represents the "number in a circle" shown on Dwg. FP-105 thru FP-107? ***RESPONSE: They are reference points used in the design calculations and have no impact on the construction***.

2. Drawings do not show suspended / acoustical ceiling for floors 1 - 5? If none, do we have to provide pipe enclosure for all exposed pipes? ***RESPONSE: No. The drawings show where piping is in hung ceiling area, soffit area or where pipe enclosure is required. All other areas are exposed.***

3. Dwgs. FP-102 & FP-104 show smoke & heat detectors not shown on electrical drawings. Are we to follow FP or E drawings for smoke & heat detectors, or both? ***RESPONSE: Both. Note; There are no smoke or heat detectors shown on FP-102***

4. What do symbols GWR, GW S & R on Dwg. M-301, 311 and 313 stand for? Dwg. M-101 Symbol List does not include this. Believe it is for glycol supply & return pipes. ***RESPONSE: Glycol Water supply and return.***

5. Dwg. E-101, Note 11: Please note that this elevator was not installed by Tower Elevator. It is an old chain drive Westinghouse elevator, and does not meet any code. There may be more work involved than just upgrading the fire recall system. Who will be responsible for additional upgrade(s) beyond the fire recall upgrade? ***RESPONSE: The contractors scope of work for this project involves the upgrade of the fire recall control systems only.***

6. Dwg. E-102, Note 3: What is COB Door and KEY CKT? ***RESPONSE: The Computer operations Building (COB) door is shown on drawings A-102 as the set of doors on the western wall of Lobby-G2(it leads to the ramp).The override Key circuit (CKT.) allows the emergency personnel to gain access to secure area by using emergency key to bypass the door locks.***

7. Specification Section 16528 Exterior Lighting is missing, please provide specs. ***RESPONSE: Delete reference to Section 16528 in the Table of Contents. The individual list of technical specifications is correct.***

8. Specification Section 16263 Diesel Generator Set is shown on the Table of Contents, but the correct section to be 16230, please confirm. ***RESPONSE: The Section number in the Table of Contents is incorrect and should be Section 16230. The individual list of technical specifications is correct.***

Also generator major requirements were left blank (i.e. para. 1.4.2.g, para 1.4.3.o thru u, etc). Please provide data/values for these critical items. ***RESPONSE: Paragraphs 1.4.2 and 1.4.3 contain a list of Generator and Diesel Engine information that the contractor must submit to the Contract Officer. This information is obtained from the actual equipment that the Contractor purchases. These items referred to were left blank because they are to be provided by the contractor and submitted after the contractor has purchased the generator engine.***

9. Perimeter excavation around the building for grounding cable will cause damage to existing and old plantings and will not survive after removal for excavation (some never plantings will survive). Do we have account for replacing all plantings? ***Response: Yes. See Drawings A-101, note 17.***

10. Does the 3000A switchboard have to be within the generator enclosure or is there another location it can be installed? ***Response***: ***Yes, within the generator enclosure.***

11. Dwg. E108 basement power plan shows existing service disconnect switch (breaker), is this the existing 4000A switchgear, or is this just the service disconnect? Where is the 4000A switchboard located if this is not it? **Response**: ***The 4000 ampere disconnect switch in the basement is the service disconnect switch. It is in the very corner of the room, to the right of the Leibert air conditioning unit.***

12. What type of electrical gear is existing? GE, Square D, Cutler Hammer, etc? This info is needed in order to supply all of the new breakers. **Response**: ***Burns and Roe does not have this information.***

13. Since the 225A feed from the generator is not shown with a neutral, does the 225A UPS - HVAC ATS need to be supplied as a 4 pole or can it be a 3-pole? ***Response: A 4 pole is required, see addendum***.

14. What do we need to supply for the generator auxiliary power panel? ***Response***: ***See drawings E-111, Switchboard PP-CR (Section 2).*** Also, we were advised at the walk-thru that the generator will either be taken out of the scope, or to be downsized. When can we expect the decision? ***Response: No comment.***

15. Do the conduits in the underground duckbank have to be RGS? Specs do not provide info for underground encased ductbanks. ***Response***: ***No, see addendum.***

16. We were not able to see any halon cylinders due to inaccessibility to some certain rooms. Please advise quantity, capacity and weight of existing halon cylinders to be removed and shipped to Richmond, VA. ***Response: As shown on drawings FP-103, there are ten halon cylinders that must be removed. Records indicate that the quantity of halon in these cylinders range from 176 lbs to 515 lbs.***

17. Floors 2 thru 5 do not have suspended ceiling, and dwgs do not call to install new ceilings. In this case, some sprinkler pipes (branching out from the pipe in the soffit) in the some rooms, and fire fire alarm wiring will be exposed:

10.a. Do we have to provide aluminum pipe enclosure for all exposed sprinkler pipe although not shown on the drawings? ***Response***: ***No***

17.b. What type of exposed wire encasement will be acceptable, conduit or wiremold? ***Response***: ***In corridors, bathrooms and offices metal wire encasement painted to match the existing wall or ceiling is required. In mechanical rooms and workshops conduits are required.***

5. Additional Specification Revisions:

1. Replace Section 800.10. Replace in it's entirety with the following:

0800.10 RECORD DRAWINGS (R.6-01)

a. **General:** The Contractor will maintain as-built drawings during the construction period and will submit final record drawings at the completion of individual facilities. The Government will provide to the Contractor the CAD (Computer-Aided Drafting) files consisting of compact (computer) disks or magnetic media of the drawing files in the appropriate CAD format (i.e. "Microstation", "Autocad", etc.) for the project. The Contractor is required to make prints or mylars from the CAD files and continuously maintain drawings to show current as-built conditions for the duration of the construction. Except for updates as indicated below, the Contractor may maintain as-built drawings by marking up drawings by hand or by CAD methods. Scanned drawings will not be acceptable. If the Government cannot provide CAD files for the project drawings, mylar (reproducible) drawings will be provided. The contractor will then be required to comply with all requirements indicated herein by the use of hand drafting.

Note: If this project is a design-build construction type, where the Contractor accomplishes the design, the drawings will be developed by the Contractor in the appropriate CAD file format (or reproducible drawings) as prescribed by the contract, instead of the Government providing them to the Contractor. All other requirements indicated herein will apply.

b. **Progress As-built Prints:** During construction the Contractor is responsible for maintaining up to date one set of paper prints to show as-built construction conditions. These prints shall be kept current and available on the job site at all times. All changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accordingly and neatly recorded as they occur by means of details and notes. The as-built prints will be jointly inspected for accuracy and completeness by the Contracting Officer's Representative and a responsible representative of the Contractor prior to submission of each monthly pay estimate. Progress as-builts shall show the following information, but not limited thereto:

(1) The location and description of any utility lines, valves, or other installations of any kind within the construction area. The location includes dimensions to permanent features.

(2) The location and dimensions of any changes with the building and structure.

(3) Correct grade or alignment of roads, structures or utilities if any changes were made from the contract plans.

(4) Correct elevations if changes were made in site grading

(5) Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor including but not limited to fabricated, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

(6) The topography and grades of all drainage installed or affected as part of the project construction.

(7) All changes, which result from contract modifications.

(8) Where contract drawings or specifications allow options, only the option selected for construction shall be shown on the as-built prints.

(9) All amendments to the contract drawings issued during the solicitation period shall be posted on the as-built drawings.

c. **Hand Drafting:** If mylars only are provided to the Contractor, they shall be updated using hand drafting. Only personnel proficient in the preparation of engineering drawings to standards satisfactory and acceptable to the Government shall be employed to modify the mylar reproduction drawings or prepare additional new drawings. All additions and corrections to the contract drawings shall be neat, clean and legible, and shall match the adjacent line work and/or lettering being annotated in type, density, size and style. All drafting work shall be done using the same medium (pencil, plastic lead or ink) that was employed on the original contract drawings and with graphic lead on paper base material. The title block to be used for any new as-built drawings shall be similar to that used on the original contract drawings.

d. **Protection of Records**: The Contractor shall be responsible for the protection and safety of mylars and CAD record until returned to the Contracting Officer. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at his expense.

e. **50% As-Built Update**: At the 50% point in construction of this project (as determined by progress payments) the Contractor will update the CAD files of the project drawings in the appropriate CAD program to show as-built conditions as above, and submit an updated computer disk and one set of prints to the Contracting Officer for approval. If mylars only are provided to the Contractor, they shall be updated at this stage using hand-drafting as specified herein, and the Contractor shall submit one set of prints to the Contracting Officer for approval. Any required corrections will be made by the Contractor before payment will be approved for this item. The Contractor must use the updated CAD record or mylar drawings to produce required prints.

f. **Preliminary Record Drawing Submittal:** At least thirty calendar (30) days before the anticipated date of final acceptance inspection the Contractor shall deliver two copies of progress prints showing final as-built conditions to the Contracting Officer for review and approval. These prints shall correctly show all the features of the project as it has been constructed, adding such additional drawings as may be necessary. They shall be printed from the CAD files updated in the appropriate CAD program, or from updated mylars if mylars only were provided to the Contractor. Within ten days, the Government will provide the Contractor one set of prints indicating required corrections to the preliminary submittal. Contractor will correct and resubmit within 5 days. Any required subsequent review and resubmission periods will each be accomplished within 5 days. Upon Government approval of the preliminary submittal, the Contractor will prepare final record drawings.

g. **Record Drawing Submission:** In the appropriate CAD program each drawing shall be marked with the words "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in font which will print at least 3/16" high. All revisions to the original contract drawings will be dated in the revision block. All prints and mylars must be reproduced from the updated CAD files. If mylars only were provided to the Contractor, they shall be hand-lettered or stamped as indicated above, and revisions shown in revision block. A minimum of 5 calendar days before the anticipated date of final acceptance inspection of the project the Contractor shall deliver to the Contracting Officer:

Three (3) CD's (ROM) of CAD files of Record Drawings.
One (1) set of Mylar Record Drawings
One (1) copy of prints of Record Drawings.

Failure to make an acceptable submission of Record Drawings will delay the Final Acceptance Inspection for the project and shall be cause for withholding any payment due the Contractor under this contract..

h. **Property**: All paper prints, reproducible drawings and CAD files will become property of the Government upon final approval. Approval and acceptance of the final record drawings shall be accomplished before final payment is made to the Contractor.

Payment: No separate payment will be made for the as-built and record drawings or updating of CAD files required under this contract, and all costs in connection therewith shall be considered a subsidiary obligation of the Contractor.

2. Replace Section 01420. Replace in it's entirety with the following:

SECTION 01420
SAFETY
nyd 7/01

1.0 **SAFETY:** The contractor shall comply with all applicable Federal, State, and local safety and occupational health laws and regulations. Applicable provisions of the Corps of Engineers manual entitled Safety and Health Requirements Manual EM 385-1-1, dated 3 September 1996 will be applied to all work under this contract. The referenced manual may be purchased from the Contracting Officer's Representative (COR) at the job site, from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328, or via the internet at www.USACE.army.mil.

1.1 **U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385—1-1:** This paragraph applies to contracts and purchase orders that require the Contractor to comply with EM 385-1-1 (e.g. contracts that include the Accident Prevention Clause at FAR 52.236-13 and/or safety provisions). EM 385-1-1 and its changes are available at http://www.hq.usace.army.mil (at the HQ homepage, select Safety and Occupational Health and then select Changes to EM). The Contractor shall be responsible for complying with the current edition and all changes posted on the web as set in this solicitation.

2.0 **ACCIDENT PREVENTION PROGRAM**: Within fifteen (15) calendar days after receipt of Notice to Proceed, and at least ten (10) calendar days prior to the Preconstruction Safety Conference, four (4) copies of the Accident Prevention Plan shall be submitted for review and acceptance by the Contracting Officer or the Contracting Officers Representative (COR). The accident prevention program shall be prepared in the format outlined in Appendix A of EM 385-1-1, "Minimum Basic Requirements for Accident Prevention Plan".

3.0 **HAZARD ANALYSIS**: Prior to beginning each major phase of work, an Activity Hazard Analysis shall be prepared by the Contractor performing that work, and submitted for review and acceptance. The format shall be in accordance with EM 385-1-1, figure 1-1. A major phase of work is defined as a operation involving a type of work presenting hazards not experienced in previous operations or where a new contractor or work crew is to perform. (See Contractor Quality Control specification for further guidance regarding coordination of "Activities" and "Principal Steps" indicated in the Activity Hazard Analysis with Contractor Quality Control activities). The analysis shall define the activities to be performed and identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on that phase until the activity hazard analysis has been accepted and a preparatory meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activities, including the government on-site representative(s). The activity hazard analyses shall be continuously reviewed and when appropriate modified to address changing site conditions or operations, with the concurrence of the site safety representative, the site superintendent, and the Contracting Officer. Activity hazard analyses shall be attached to and become part of the accident prevention plan. It may also be developed prior to each phase of work undertaken in the contract.

3.1 Hazard analysis shall be used to identify and evaluate all substances, agents, or environments that present hazards and recommend control measures. Engineering and administrative controls shall be used to control hazards; in cases where engineering or administrative controls are not feasible, personal protective equipment may be used.

3.2 Information contained in MSDS (Material Safety Data Sheets) shall be incorporated in the hazard analysis for the activities in which hazardous or toxic materials will be used, or generated (e.g. fiberglass, crystalline silica, metal dust or fume, etc.).

4.0 **SITE SAFETY OFFICER** : The contractor shall identify an individual directly employed by the contractor as Site Safety Officer responsible to the Contractor to implement and continually enforce the Accident Prevention Plan. The site safety officer shall not be the same individual as the Quality Control System Manager if the CQC System Manager is required to have no duties other than Quality Control. The site safety officer shall have the authority to suspend operational activities if the health and safety of personnel are endangered, and to suspend an individual from operational activities for infractions of the Accident Prevention Plan.

4.1. Qualifications: The name, qualifications (training and experience) of the designated Site Safety Officer shall be included in the Accident Prevention Plan. The Site safety officer shall have the following qualifications:

a. A minimum of 5 years construction experience with at least 2 years experience in implementing safety programs at construction work sites for projects of comparable scope and complexity.
b. Documented experience in construction techniques and construction safety procedures.
c. Working knowledge of Federal and state occupational health and safety regulations.
d. Specific training in excavation safety, fall protection, and confined space.
e. CPR/First Aid certification (current)
f. Familiarity with and ability to use and implement the Corps of Engineers Safety Manual EM 385-1-1.

4.2. Other Requirements: Other sections of the contract documents may also require separate specially qualified individuals in such areas a chemical data acquisition, sampling and analysis, medical monitoring, industrial hygiene, quality control, etc.

5.0 **SITE INSPECTIONS**: The site safety officer shall perform daily inspections of the job sites and the work in progress to ensure compliance with EM 385-1-1 and to determine the effectiveness of the accident prevention plan. Daily inspection logs shall be used to document inspections noting safety and health deficiencies, deficiencies in the effectiveness of the accident prevention plan, and corrective actions including timetable and responsibilities. The daily inspection logs will be attached to and submitted with the Daily Quality Control Reports or may be incorporated in the daily CQC report. Each entry shall include date, work area checked, employees present in work area, protective equipment and work equipment in use, special safety and health issues and notes, and signature of the preparer.

6.0 **HIGHLIGHTED PROVISIONS**: In addition to those items contained in EM 385-1-1, Appendix A, include the following items in the accident prevention plan:

6.1 Hard Hat Area. A statement that the jobsite is classified a "hard hat" area from start to finish.

6.2 Sanitation and Medical Requirements. Estimate the greatest number of employees, supervisors, etc., to be working at peak construction period, including subcontractor personnel. Include sanitation requirements and medical facilities identified for the job site. If a medical facility or physician is not accessible within five minutes of an injury to a group of two or more employees for the treatment of injuries, identify at least two or more employees on each shift who are qualified to administer first aid and CPR.

6.3 Equipment Inspection. The type of inspection program on cranes, trucks, and other types of construction equipment the Contractor plans to implement. Who will be responsible for the inspection and how the Contractor will control equipment of sub-contractors and equipment bought to the site by rental companies. Types of records to be kept.

6.3.1 Copies of records of all equipment inspections will be kept at the job site for review by the designated authority.

6.4 Crane & Derrick Operators: Written proof of qualification for all crane and derrick operators in accordance with EM 385-1-1, 16.C.04. Qualification shall be by written (or oral) examination and practical operating examination

unless the operator is licensed by a state or city licensing agency for the particular type of crane or derrick. Proof of qualification shall be provided by the qualifying source.

7.0 **ACCIDENT REPORTS**: The contractor shall immediately report all accidents by telephone to the COR.

7.1 The Contractor will provide an initial written report of the accident to the COR within 24 hours. The Contractor shall complete and submit ENG Form 3394 for all accidents involving lost work time, medical treatment, and/or property damage in excess of $2000.00 within 48 hours of the accident. The report shall accurately represent the circumstances of the accident, cause of the accident, extent of medical treatment, extent of injuries and steps to prevent occurrence of similar accidents. The hazard analysis covering the work activity being undertaken during the accident shall be attached to the report.

7.2 Daily records of all first aid treatment not otherwise reportable shall be maintained at the job site and furnished to the designated authority upon request. Records shall also be maintained of all exposure and accident experience incidental to the work (OSHA Form 200 or equivalent as prescribed by 29 CFR 1904).

8.0 **MONTHLY EXPOSURE REPORTS**: The Contractor shall submit to the COR no later than the 1st day of each month, a compilation of manhours worked each month by the prime contractor and each subcontractor. In addition ,the contractor shall report the number of accidents, severity, class of accidents, and lost time work days for each month.

9.0 **CLEAN-UP**: The Contractor's Accident Prevention Plan shall identify the individual's responsible for cleanup and shall establish a regular housekeeping procedure and schedule. If the COR determines that cleanup is not being performed satisfactorily, the Contractor shall establish a work crew to perform the continuous cleanup required by the contract clause titled: CLEANING UP: The number of individuals appointed to the cleanup work crew shall be increased as required in order to render adequate cleanup.

10.0 **FOCUS AREAS**: To supplement and emphasize the requirements of EM 385-1-1, the following is provided and shall be met as applicable.

10.1 Electrical Work: Electrical work shall not be performed on or near energized lines or equipment unless specified in the plans and specifications and approved by the COR. Plan and layout of proposed temporary power to the construction site shall be submitted and approved by the COR before work will be permitted.

10.1.1 Upon request by the Contractor, arrangements will be made for de-energizing lines and equipment so that work may be performed. All outages shall be requested through the COR a minimum of 14 days, unless otherwise specified, prior to the beginning of the specified outages. Dates and duration will be specified.

10.2 If approved by the COR, the following work may be performed with the lines energized using certified hot line equipment on lines above 600 volts, when the following conditions have been met:

a. work below the conductors no closer than the clearance required in EM 385-1-1 from the energized conductors.

b. setting and connection of new pre-trimmed poles in energized lines which do not replace an existing pole.

c. setting and removing transformers or other equipment on poles.

d. installation or removal of hot line connectors, jumpers, dead-end insulators for temporary isolation, etc., which are accomplished with hot line equipment from an insulated bucket truck.

10.3 Energized Line Work Plan: The Contractor shall submit a plan, in writing, describing his/her method of operation and the equipment to be used on energized lines. Proper certification from an approved source of the safe condition of all tools and equipment will be provided with the plan. The work will be planned and scheduled so that proper supervision is maintained. Emergency procedures, including communication, for disconnecting power in the

event of an accident will be outlined in the plan. The Contractor will review his/her plan with the COR prior to being granted permission to perform the work.

10.4. No work on lines greater than 600 volts will be performed from the pole or without the use of an insulated bucket truck.

10.5 No work will be done on overbuilt lines while underbuilt lines are energized, except for temporary isolation and switching.

10.6 Electrical Tools and Cords: Hand held electrical tools shall be used only on circuits protected by ground fault circuit interrupters for protection of personnel. All general use extension cords shall be hard usage or extra hard usage as specified in Table 11-1 of EM 385-1-1.
Damaged or repaired cords shall not be permitted.

10.8 Temporary Power: Temporary electrical distribution systems and devices shall be checked and found acceptable for polarity, ground continuity, and ground resistance before initial use and after modification. GFI outlets shall be installed and tested with a GFI circuit tester (tripping device) prior to use. Portable and vehicle mounted generators shall be inspected for compliance with EM 385-1-1 and NFPA 70. All electrical equipment located outdoors or in wet locations shall be enclosed in weatherproof enclosures in accordance with EM 385-1-1. Records of all tests and inspections will be kept by the contractor and made available on site for review by the designated authority. Submit sketch of proposed temporary power for acceptance.

10.9 Rollover Protective Structures (ROPS): Seat belts and ROPS shall be installed on all construction equipment as required by paragraph 16.B.12 of EM 385-1-1. The operating authority will furnish proof from the manufacturer or licensed engineer that ROPS meets the applicable SAE standards cited in EM 385-1-1, pg. 257.

10.10 Radiation Permits or Authorizations: Contractors contemplating the use of a licensed or DOD regulated radiological device or radioactive material on a DOD installation will secure appropriate permit or authorization from the Department of Army or Department of the Air Force, as applicable. A 45-day lead-time should be programmed for obtaining the necessary authorization or permit. When requested, the COR will assist the Contractor in obtaining the required permit or authorization.

10.10.1 The Contractor shall develop and implement a radiation safety program to comply with EM 385-1-1, Section 06.E. Provisions for leak tests, authorized personnel, transport certificates, etc. will be addressed in the radiation safety program.

10.11 Elevating Work Platforms: All elevating work platforms shall be designed, constructed, maintained, used, and operated in accordance with ANSI A 92.3, ANSI A92.6, ANSI A92.5 and EM 385-1-1, Sections 22.J and 16.A.

10.11.1 Only personnel trained in the use of elevating work platforms shall be authorized to use them. A list of authorized users will be maintained by the contractor at the job site. The list will be updated to remain current and made available for review on site by the designated authority.
Personnel safety belts must be worn.

10.12 Fall Protection: Fall protection in the form of standard guardrails, nets, or personal fall arrest systems will be provided for all work conducted over 6 feet in height The contractor will submit his/her proposed method of fall protection to the COR as part of the Job Hazard Analysis for acceptance. If the contractor deems that conventional fall protection as described above is not feasible, or creates a greater hazard, the Contractor will prepare a written fall protection plan in accordance with OSHA 29 CFR 1926.502(k). The plan will demonstrate the reasons that conventional fall protection is unfeasible or constitutes a greater hazard and will provide alternative safety measures for review and acceptance by the COR.

10.13 Excavations: All open excavations made in the earth's surface four (4) foot or greater will be under the supervision of a competent person trained in, and knowledgeable about, soils analysis, the use of protective systems, and the requirements of OSHA 29 CFR 1926, Subpart P and EM 385-1-1, Section 25. The competent

person shall be designated in writing by the Contractor and a resume of their training and experience submitted to the COR for acceptance.

10.13.1 Excavations hazards and methods for their control will be specified in the job hazard analysis.

10.13.2 Sloping and benching: The design of sloping and benching shall be selected from and in accordance with written tabulated data, such as charts and tables. At least one copy of the tabulated data will be maintained at the job site.

10.13..3 Support Systems: shall be in accordance with one of the systems outlined in a through c below:

a. Designs drawn from manufacturer's specifications and in accordance with all specifications, limitations, and recommendations issued or made by the manufacturer. A copy of the manufacture's specifications, recommendations, and limitations will be in written form and maintained at the job site.

b. Designs selected from and in accordance with tabulated data (such as tables and charts). At least one copy of the design shall be maintained at the job site during excavation.

c. Designed by a registered engineer. At least one copy of the design shall be maintained at the job site during excavation.

10.13.4 Excavations Greater than 20 Feet in Height: Sloping and benching or support systems shall be designed by a registered professional engineer. Designs shall be in writing and at least one copy of the design shall be maintained at the job site during excavation. The contractor will ensure that the registered professional engineer is working within a discipline applicable to the excavation work; i.e. it would be inappropriate for an electrical engineer to approve shoring designed for an excavation.

10.14 Confined Space: Entry into and work in a confined space will not be allowed when oxygen readings are less than 19.5% or greater than 23.5% or if the lower explosive limit (LEL) reading is greater than 10%, unless these conditions are adequately addressed in the confined space entry plan. In addition, action levels for toxic atmospheres shall be determined and any other known or potential hazards eliminated prior to entry.

11.0 **LANGUAGE**: For each group that has employees that do not speak English, the Contractor will provide a bilingual foreman that is fluent in the language of the workers. The contractor will implement the requirements of EM 385-1-1, 01.B through these foremen.

12.0 **CONTRACTOR SAFETY MEETINGS AND DOCUMENTATION:** Contractor shall conduct and document safety meetings among its personnel as required by EM 385-1-1 and as indicated herein. Monthly meetings shall be held among all supervisors, and weekly meetings shall be conducted by supervisors or foreman for all workers. The agenda of the meeting shall include specific safety items pertinent to work being performed. Documentation shall include a summary of items discussed as well as other items required by the EM 385-1-1. Documentation shall be submitted to the Government monthly.

13.0 **COORDINATION WITH OTHER SPECIFICATION SECTIONS**: The requirements of this section are meant to supplement requirements of other sections. In cases of discrepancies the most stringent requirements shall apply . Other safety-related requirements can be found in the following specification sections:

a. Specification Section 00800, Special Contract Requirements
b. Specification Section 00700, Contract Clauses, paragraph entitled “accident Prevention”

c. Specification Section entitled “Contractor Quality Control”
d. Other specifications or contract requirements relating to site safety or health requirement or medical monitoring.

14.0 **CONTRACTOR PERFORMANCE APPRAISAL**: The occurrence of accidents and near misses due to negligence are strong indications that there has been insufficient emphasis on effective implementation and/or commitment to the accident prevention program. Should it become obvious that only lip service is being given to this program, an interim unsatisfactory performance appraisal rating will be issued. If safety continues to be unsatisfactory or marginal, the unsatisfactory rating will become final. The contractor should be aware that this appraisal will be stored in a national computer database which can be accessed by a multitude of agencies or municipalities desiring information on prospective contractors. An unsatisfactory rating in this database may affect the contractor's ability to obtain future Government work.

-end-